AMENDMENTS

In the Claims

Current Status of Claims

1.(**currently amended**) A method comprising the step of:

contacting a fluid including noxious sulfur-containing species with an effective amount of a sulfur scavenging composition comprising substantially monomeric aldehyde-amine adducts formed from a reaction of a molar excess of at least one aldehyde or aldehyde donor and at least one secondary amine having at least one sterically bulk substituent so that the adducts are substantially compounds derived from the reaction of a single aldehyde and a single amine.

2.(**currently amended**) The method of claim 1, wherein the monomeric aldehyde-amine adducts are characterized by compounds of formulas (I), (II) or mixtures thereof:

$$CH_2R - NR^1R^2 \quad (I)$$

$$CH_2R - R^4NR^3NR^5 - CH_2R \quad (II)$$

where R is a hydrogen atom (H) or a carbon-containing group, R^1 and R^2 are the same or different, at least one being a sterically hindered carbon-containing group having between 3 and about 24 carbon atoms or R^1 and R^2 can form a ring system, R^3 is a divalent sterically hindered carbon-containing group, R^4 and $R^5$are the same or different and are H or a CH_2R group and where one or more of the carbon atoms of R, R^1, R^2, R^3, R^4, R^5 or mixtures thereof can be replaced by oxygen atoms in the form of ether moieties, nitrogen groups in the form of tertiary amine or amide moieties or mixtures thereof, and where one or more hydrogen atoms of R, R^1, R^2, R^3, R^4, R^5 or mixtures thereof can be replaced by fluorine atoms, chlorine atoms or mixtures thereof,

where the CH_2R groups are derived from the at least one aldehyde of the formula R-CHO used in the reaction and where the effective amount is sufficient to reduce, to reduce below a target level or to substantially eliminate the noxious sulfur-containing species in the fluid.

3.(**original**) The method of claim 2, wherein R^1 and R^2 are the same or different sterically hindered carbon-containing groups.

4.(**original**) The method of claim 2, wherein R is H.

5.**(original)** The method of claim 2, wherein R is selected from the group an alkyl group, an aryl group, an alkaryl group, an aralkyl group and mixtures or combinations thereof.

6.**(original)** The method of claim 2, wherein R is H and R^1 and R^2 are the same or different and are selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, isobutyl, pentyl, isopentyl, neopentyl, adamanyl, phenyl, benzyl, cyclopentyl, cyclohexyl, tetramethylamino bis-propyl ($(CH_3)_2NCH_2CH_2CH_2$), derived from bis(4-aminocyclohexyl)methane, derived from bis(4-aminophenyl)methane, derived from 1,8-diazabicyclo[5.4.0]undec-7-ene, derived from bispicoylamine and mixtures or combinations thereof.

7.**(original)** The method of claim 1, wherein the composition comprises a solution including from about 5 wt.% to about 50 wt.% of the adducts the remainder being a solvent.

8.**(original)** The method of claim 1, wherein the fluid comprises an inverted mud or drilling fluid.

9.**(original)** The method of claim 1, wherein the fluid is selected from the group consisting of an overbalanced inverted drilling fluid, a weighted inverted drilling fluid, and an underbalanced inverted drilling fluid.

10.**(original)** The method of claim 1, wherein the fluid comprises a processed fluid from refinery or a gas production facility.

11.**(original)** The method of claim 1, wherein the processed fluid is selected from the group consisting of gasoline, kerosene, jet fuels, diesels, stabilized condensates, and LPG.

12.**(original)** The method of claim 1, wherein the fluid is crude oil or condensate from oil/gas production.

13.**(original)** The method of claim 1, wherein the fluid is selected from the group consisting of a heavy oil fraction from recovery of bitumens, a processed mined oil, a process mined extract, bunker

C and a heavy fuel.

14.(**original**) The method of claim 1, wherein fluid comprises lubricating oil.

15.(**original**) The method of claim 1, wherein the fluid comprises an oil completion fluid.

16.(**original**) The method of claim 1, wherein the fluid comprises a packer fluid.

17.(**original**) The method of claim 1, wherein the fluid is selected from the group consisting of a storage fluid and a pickling fluid.

18.(**currently amended**) A method comprising the step of:

adding, to a fluid including noxious sulfur-containing compounds, an effective amount of a sulfur scavenging composition comprising substantially monomeric aldehyde-amine adducts formed from a reaction of a molar excess of an aldehyde or aldehyde donor and a secondary amine having at least one sterically bulk substituent so that the adducts are substantially compounds derived from the reaction of a single aldehyde and a single amine.

19.(**currently amended**) The method of claim 18, wherein the monomeric aldehyde-amine adducts are characterized by compounds of formulas (I), (II) or mixtures thereof:

$$CH_2R - NR^1R^2 \quad (I)$$

$$CH_2R - R^4NR^3NR^5 - CH_2R \quad (II)$$

where R is a hydrogen atom (H) or a carbon-containing group, R^1 and R^2 are the same or different, at least one being a sterically hindered carbon-containing group having between about 3 and about 24 carbon atoms or R^1 and R^2 can form a ring system, R^3 is a divalent sterically hindered carbon-containing group, R^4 and $R^5$are the same or different and are H or a CH_2R group and where one or more of the carbon atoms of R, R^1, R^2, R^3, R^4, R^5 or mixtures thereof can be replaced by oxygen atoms in the form of ether moieties, nitrogen groups in the form of tertiary amine or amide moieties or mixtures thereof, and where one or more hydrogen atoms of R, R^1, R^2, R^3, R^4, R^5 or mixtures thereof can be replaced by fluorine atoms, chlorine atoms or mixtures thereof,

where the CH_2R groups are derived from the at least one aldehyde of the formula R-CHO used in the reaction and where the effective amount is sufficient to reduce, to reduce below a target level or to substantially eliminate the noxious sulfur-containing species in the fluid.

20.(**original**) The method of claim 18, wherein the adding step is a continuous adding step, where the fluid is a fluid stream and the amount is sufficient to reduce, to reduce below a target level or to substantially eliminate the noxious sulfur-containing species in the fluid on a continuous basis.

21.(**original**) The method of claim 18, wherein the adding step is an intermittent adding step, where the fluid is a fluid stream and the amount is sufficient to reduce, to reduce below a target level or to substantially eliminate the noxious sulfur-containing species in the fluid on an intermittent basis.

22.(**original**) The method of claim 18, adding step is a periodic adding step, where the fluid is a fluid stream and the amount is sufficient to reduce, to reduce below a target level or to substantially eliminate the noxious sulfur-containing species in the fluid on a periodic basis.

23.(**original**) The method of claim 19, wherein R^1 and R^2 are the same or different sterically hindered carbon-containing groups.

24.(**original**) The method of claim 19, wherein R is H.

25.(**original**) The method of claim 19, wherein R is selected from the group an alkyl group, an aryl group, an alkaryl group, an aralkyl group and mixtures or combinations thereof.

26.(**original**) The method of claim 19, wherein R is H and R^1 and R^2 are the same or different and are selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, isobutyl, pentyl, isopentyl, neopentyl, adamanyl, phenyl, benzyl, cyclopentyl, cyclohexyl, tetramethylamino bis-propyl ($(CH_3)_2NCH_2CH_2CH_2$), derived from bis(4-aminocyclohexyl)methane, derived from bis(4-aminophenyl)methane, derived from 1,8-diazabicyclo[5.4.0]undec-7-ene, derived from bispicoylamine and mixtures or combinations thereof.

27.(**original**) The method of claim 18, wherein the composition comprises a solution including from about 5 wt.% to about 50 wt.% of the adducts the remainder being a solvent.

28.(**currently amended**) A method comprising the step of:

adding a fluid into a container;

adding, prior to, after or concurrently, an effective amount of a sulfur scavenging composition comprising substantially monomeric aldehyde-amine adducts of a molar excess of at least one aldehyde or aldehyde donor with at least one amine having at least one sterically bulk substituent so that the adducts are substantially compounds derived from the reaction of a single aldehyde and a single amine,

where amount is sufficient to reduce, reduce below a target level or substantially eliminating noxious sulfur-containing species in fluid.

29.(**original**) The method of claim 28, wherein the container is selected from the group consisting of a tank, a tanker, a pipeline, a barge, a floating platform, and a ship.

30.(**original**) The method of claim 28, wherein the composition comprises a solution including from about 5 wt.% to about 50 wt.% of the adducts the remainder being a solvent.

31.(**currently amended**) A method comprising the step of:

introducing into a downhole fluid an effective amount of a sulfur scavenging composition comprising substantially monomeric aldehyde-amine adducts of a molar excess of at least one aldehyde or aldehyde donor with at least one amine having at least one sterically bulk substituent so that the adducts are substantially compounds derived from the reaction of a single aldehyde and a single amine,

where amount is sufficient to reduce, reduce below a target level or substantially eliminating noxious sulfur-containing species in fluid.

32.(**original**) The method of claim 31, wherein the introduction is via a chemical tool, coiled tubing, or capillary coiled tubing (CCT).

33.**(original)** The method of claim 31, wherein the introduction comprises squeezing.

34.**(original)** The method of claim 31, wherein the introducing step is a batch introducing step.

35.**(original)** The method of claim 31, wherein the composition comprises a solution including from about 5 wt.% to about 50 wt.% of the adducts the remainder being a solvent.

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